

Claim Amendments

1-32. (canceled)

33. (currently amended) ~~The~~ A zinc-containing optical glass ~~according to claim 30, wherein the~~ with a refractive index (n_d) ~~is~~ being in the range of from about 1.56 to about 1.63 and ~~the an~~ Abbe number (v_d) ~~is~~ being in the range of from about 42 to about 52, ~~and said zinc-containing optical glass comprises~~ comprising, on an oxide basis, the composition of:

<u>Material</u>	Percentage <u>by weight</u>
SiO ₂	40 - 55
ZnO	26 - 41
PbO	1 - 16
sum of ZnO+PbO	31 - 48
Li ₂ O	0 - <3
Na ₂ O	0 - 12
K ₂ O	0 - 10
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6

CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5
ZrO ₂	0 - <2.

34. (currently amended) The zinc-containing optical glass according to claim ~~30~~ 33, wherein the refractive index (n_d) is in the range of from about 1.60 to about 1.63 and the Abbe number (v_d) is in the range of from about 43 to about 47, and said zinc-containing optical glass comprises, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO ₂	40 - 47
ZnO	32 - 41
PbO	5 - 14
sum of ZnO+PbO	40 - 48
Li ₂ O	0 - <3
Na ₂ O	0 - 12
K ₂ O	0 - 10

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sum of $\text{Li}_2\text{O} + \text{Na}_2\text{O} + \text{K}_2\text{O}$	≥ 2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B_2O_3	0 - <1
Al_2O_3	0 - <1.5
ZrO_2	0 - <2

35-44. (canceled)

45. (new) A zinc-containing optical glass, suitable for use as an optical element, with a refractive index (n_d) being in the range of from about 1.52 to about 1.66 and an Abbe number (v_d) being in the range of from about 35 to about 54;

said zinc-containing optical glass consisting of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage by weight</u>
SiO_2	38 - 58
ZnO	0.3 - 42
PbO	0 - <30

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sum of ZnO+PbO	20 - 55
Li ₂ O	0 - <3
Na ₂ O	0 - 14
K ₂ O	0 - 12
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5
ZrO ₂	0 - <2

≥0% by weight of at least one refining agent.

46. (new) The zinc-containing optical glass according to claim 45, wherein the refractive index (n_d) is in the range of from about 1.54 to about 1.64 and the Abbe number (v_d) is in the range of from about 40 to about 52, and said zinc-containing optical glass consists of, on an oxide basis, the composition of:

<u>Material</u>	Percentage
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	<u>by weight</u>
SiO ₂	39 - 54
ZnO	12 - 41
PbO	6 - 22
sum of ZnO+PbO	31 - 52
Li ₂ O	0 - <3
Na ₂ O	0 - 13
K ₂ O	0 - 11
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5
ZrO ₂	0 - <2

≥0% by weight of at least one refining agent.

47. (new) The zinc-containing optical glass according to claim 45, wherein the refractive index (n_d) is in the range of from about

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1.56 to about 1.63 and the Abbe number (V_d) is in the range of from about 42 to about 52, and said zinc-containing optical glass consists of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO ₂	40 - 55
ZnO	26 - 41
PbO	1 - 16
sum of ZnO+PbO	31 - 48
Li ₂ O	0 - <3
Na ₂ O	0 - 12
K ₂ O	0 - 10
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5

ZrO₂ 0 - <2

≥0% by weight of at least one refining agent.

48. (new) The zinc-containing optical glass according to claim 45, wherein the refractive index (n_d) is in the range of from about 1.60 to about 1.63 and the Abbe number (v_d) is in the range of from about 43 to about 47, and said zinc-containing optical glass consists of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO ₂	40 - 47
ZnO	32 - 41
PbO	5 - 14
sum of ZnO+PbO	40 - 48
Li ₂ O	0 - <3
Na ₂ O	0 - 12
K ₂ O	0 - 10
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5

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SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5
ZrO ₂	0 - <2

≥0% by weight of at least one refining agent.

49. (new) The zinc-containing optical glass according to claim 45, wherein the refractive index (n_d) is in the range of from about 1.57 to about 1.59 and the Abbe number (V_d) is in the range of from about 48 to about 52, and said zinc-containing optical glass consists of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO ₂	41 - 50
ZnO	30 - 40
PbO	0 - 1
sum of ZnO+PbO	31 - 41
Li ₂ O	0 - <3
Na ₂ O	0 - 11
K ₂ O	0 - 10

sum of $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}$	≥ 2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B_2O_3	0 - <1
Al_2O_3	0 - <1.5
ZrO_2	0 - <2

$\geq 0\%$ by weight of at least one refining agent.

50. (new) The zinc-containing optical glass according to claim 45, wherein:

the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98; and

said optical glass comprises one of an optical element and an optical filter.

51. (new) The zinc-containing optical glass according to claim 45, wherein said zinc-containing optical glass further consists of, in total, up to about 1% by weight of a refining agent.

52. (new) The zinc-containing optical glass according to claim 51, wherein:

said zinc-containing optical glass further consists of, in total, up to about 0.5% by weight of a refining agent; and

said refining agent is at least one member of the group and combinations thereof: As_2O_3 and Sb_2O_3 .

53. (new) The zinc-containing optical glass according to claim 45, wherein:

the total content of ZnO plus PbO is in the range of from 21% to 55% by weight; and

the total content of CaO plus SrO is in the range of from 0% to 5% by weight.

54. (new) A zinc-containing optical glass, suitable for use as an optical element, with a refractive index (n_d) being in the range of from about 1.52 to about 1.66 and an Abbe number (v_d) being in the range of from about 35 to about 54;

said zinc-containing optical glass consisting of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage by weight</u>
SiO_2	38 - 58

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ZnO	0.3 - 42
PbO	0 - <30
sum of ZnO+PbO	20 - 55
Li ₂ O	0 - <3
Na ₂ O	0 - 14
K ₂ O	0 - 12
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5
ZrO ₂	0 - <2
Cs ₂ O	0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof: Rb₂O, La₂O₃, Y₂O₃, and GeO₂;

≥0% by weight of a coloring component; and

≥0% by weight of at least one refining agent.

55. (new) The zinc-containing optical glass according to claim 54, wherein the refractive index (n_d) is in the range of from about 1.54 to about 1.64 and the Abbe number (v_d) is in the range of from about 40 to about 52, and said zinc-containing optical glass consists of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO ₂	39 - 54
ZnO	12 - 41
PbO	6 - 22
sum of ZnO+PbO	31 - 52
Li ₂ O	0 - <3
Na ₂ O	0 - 13
K ₂ O	0 - 11
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9

B_2O_3	0 - <1
Al_2O_3	0 - <1.5
ZrO_2	0 - <2
Cs_2O	0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof: Rb_2O , La_2O_3 , Y_2O_3 , and GeO_2 ;

≥0% by weight of a coloring component; and

≥0% by weight of at least one refining agent.

56. (new) The zinc-containing optical glass according to claim 54, wherein the refractive index (n_d) is in the range of from about 1.56 to about 1.63 and the Abbe number (V_d) is in the range of from about 42 to about 52, and said zinc-containing optical glass consists of, on an oxide basis, the composition of:

<u>Material</u>	Percentage <u>by weight</u>
SiO_2	40 - 55
ZnO	26 - 41
PbO	1 - 16
sum of $ZnO+PbO$	31 - 48
Li_2O	0 - <3

Na ₂ O	0 - 12
K ₂ O	0 - 10
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5
ZrO ₂	0 - <2
Cs ₂ O	0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof: Rb₂O, La₂O₃, Y₂O₃, and GeO₂;

≥0% by weight of a coloring component; and

≥0% by weight of at least one refining agent.

57. (new) The zinc-containing optical glass according to claim 54, wherein the refractive index (n_d) is in the range of from about 1.60 to about 1.63 and the Abbe number (v_d) is in the range of from about 43 to about 47, and said zinc-containing optical glass consists

of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO ₂	40 - 47
ZnO	32 - 41
PbO	5 - 14
sum of ZnO+PbO	40 - 48
Li ₂ O	0 - <3
Na ₂ O	0 - 12
K ₂ O	0 - 10
sum of Li ₂ O+Na ₂ O+K ₂ O	≥2
F	0 - 3
MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5
ZrO ₂	0 - <2
Cs ₂ O	0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof: Rb_2O , La_2O_3 , Y_2O_3 , and GeO_2 ;

$\geq 0\%$ by weight of a coloring component; and

$\geq 0\%$ by weight of at least one refining agent.

58. (new) The zinc-containing optical glass according to claim 54, wherein the refractive index (n_d) is in the range of from about 1.57 to about 1.59 and the Abbe number (V_d) is in the range of from about 48 to about 52, and said zinc-containing optical glass consists of, on an oxide basis, the composition of:

<u>Material</u>	<u>Percentage</u> <u>by weight</u>
SiO_2	41 - 50
ZnO	30 - 40
PbO	0 - 1
sum of $\text{ZnO}+\text{PbO}$	31 - 41
Li_2O	0 - <3
Na_2O	0 - 11
K_2O	0 - 10
sum of $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}$	≥ 2
F	0 - 3

MgO	0 - 6
CaO	0 - <5
SrO	0 - 6
BaO	0 - <0.9
B ₂ O ₃	0 - <1
Al ₂ O ₃	0 - <1.5
ZrO ₂	0 - <2
Cs ₂ O	0 to about 2.5;

0 to about 5% by weight of one member of the group and combinations thereof: Rb₂O, La₂O₃, Y₂O₃, and GeO₂;

≥0% by weight of a coloring component; and

≥0% by weight of at least one refining agent.

59. (new) The zinc-containing optical glass according to claim 54, wherein the light transmission of the glass, determined at a wavelength of 400 nm and a 25 mm specimen thickness, is at least about 0.98.

60. (new) The zinc-containing optical glass according to claim 54, wherein:

said zinc-containing optical glass further consists of up to about 8% by weight of a coloring component;

said coloring component is a member of the group and combinations thereof: CuO , Cr_2O_3 , CoO , Fe_2O_3 , MnO , NiO , and V_2O_5 ; and

said zinc-containing optical glass comprises an optical filter.

61. (new) The zinc-containing optical glass according to claim 54, wherein said zinc-containing optical glass further consists of, in total, up to about 1% by weight of a refining agent.

62. (new) The zinc-containing optical glass according to claim 61, wherein:

said zinc-containing optical glass further consists of, in total, up to about 0.5% by weight of a refining agent; and

said refining agent is at least one member of the group and combinations thereof: As_2O_3 and Sb_2O_3 .

63. (new) The zinc-containing optical glass according to claim 54, wherein:

the total content of ZnO plus PbO is in the range of from 21% to 55% by weight; and

the total content of CaO plus SrO is in the range of from 0% to 5% by weight.

64. (new) The zinc-containing optical glass according to claim

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54, wherein said zinc-containing optical glass comprises an optical element.